HONEOYE LAKE WATERSHED TASK FORCE

WINTER 2023

Honeoye Lake Watershed Task Force Newsletter

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Partnership with New York State Enhances Protection of Honeoye Lake

By the Finger Lakes Land Trust (FLLT)

Thanks to a partnership between the Land Trust and the New York State Department of Environmental Conservation (DEC), three parcels totaling 57 acres in the Towns of Canadice and Richmond, Ontario County have been added to the Honeoye Inlet Wildlife Management Area. The three separate parcels near the south end of Honeoye Lake were purchased by the Land Trust in 2019 with interim funding from the organization's Opportunity Fund. This internal loan fund supports timely acquisitions on projects where temporary funding is critical. Proceeds from the sale of these parcels to the state will support future conservation projects. Two of the properties include frontage on East Lake Road and consist of steep mixed hardwood forest overlooking the inlet and lake. A third parcel located on West Lake Road buffers adjacent state-owned wetlands and provides scenic views of the lake and surrounding hillsides. Protection of these three properties will help ensure water quality within Honeoye Lake and maintain the land's role in filtering runoff.

Photo Credit: Chuck Feil

"Protecting water quality and preserving wildlife habitat are top priorities for DEC and our conservation partners across the state," DEC Commissioner Basil Seggos said. "Once again, DEC is partnering with the Finger Lakes Land Trust on acquisitions that will enhance the State's Wildlife Management Area network and these lands' recreational and environmental benefits for New Yorkers."

"These acquisitions expand recreational opportunities while helping to ensure water quality," said Land Trust Executive Director Andy Zepp. "We are delighted to continue our productive partnership with the DEC."

DEC purchased these parcels from the Land Trust utilizing the State's Environmental Protection Fund (EPF), a critical resource for environmental programs such as land acquisition, farmland protection, invasive species prevention and eradication, recreation access, water quality improvement, and environmental justice projects.

Honeoye Lake Watershed Task Force (HLWTF) Chairman's 2022 Project Update: Terry Gronwall

Projects to improve water quality in Honeoye Lake and its watershed

The Honeoye Lake Watershed Management Plan, the New York State Department of Environmental Conservation (DEC) Harmful Algal Blooms (HABs) Action Plan, and the DEC Total Maximum Daily Load (TMDL) Plan all have a common focus to implement Best Management Practices (BMPs) to reduce nutrient loading (both internal and external) and sediment reaching Honeoye Lake.

HLWTF Website: Please check out our comprehensive HLWTF website. It has regularly updated Honeoye Lake background data, a summary of HLWTF completed water quality projects, information on upcoming projects, Honeoye Lake water quality planning documents, past HLWTF newsletters, and guides for lake residents to follow that help reduce nutrient run-off into the lake. The new website also contains a weekly summer water quality blog: www.honeoyelakewatershed.org/blog

NYS DEC Water Quality Improvement Project (WQIP) Round 16 Grant Application for Honeoye Lake Aeriation System Engineering Planning Project: Ontario County Planning Department and the HLWTF was awarded a $30,000 NYS DEC WQIP grant to engage a lake management consultant for a detailed aeration system engineering design work required for a potential future permit application and implementation grant funding. We held a Public Information webinar in late April 2022 and the final report was completed in June 2022. Both are available on the HLWTF web site. www.honeoyelakewatershed.org/aeration

DEC WQIP Grant Ditch Stabilization Project: Ontario County SWCD and the Town of Canadice Highway Department completed a ditch stabilization project using Flexamat material on Cratsley Hill Road in 2022. They plan to do similar projects on additional town roads in the Honeoye Lake watershed in 2023. For more information, go to: www.honeoyelakewatershed.org/cratsley-hill-rd

DEC Honeoye Lake Nutrient Inactivation Pilot Project: The DEC Alum Treatment was completed on November 18, 2022. We anticipate seeing phosphorus reduction, algae reduction, and an increase in water clarity next summer as a result of this project. Honeoye Lake Nutrient Inactivant Pilot Study.

2022 HLWTF Newsletter: Our 2022 HLWTF Winter newsletter was published in February 2022. This newsletter contained information on all recent HLWTF projects and lake related educational articles. Available at: www.honeoyelakewatershed.org/resources

Blue-Green Algae Monitoring Project: At the request of NYS DEC, the lake surface was visually examined for blue-green algae blooms at 10 locations once a week from June through mid-October 2022. Results were shared on the DEC HABs alert web site as well as posted weekly on the HLWTF website water quality blog. honeoyelakewatershed.org/blog

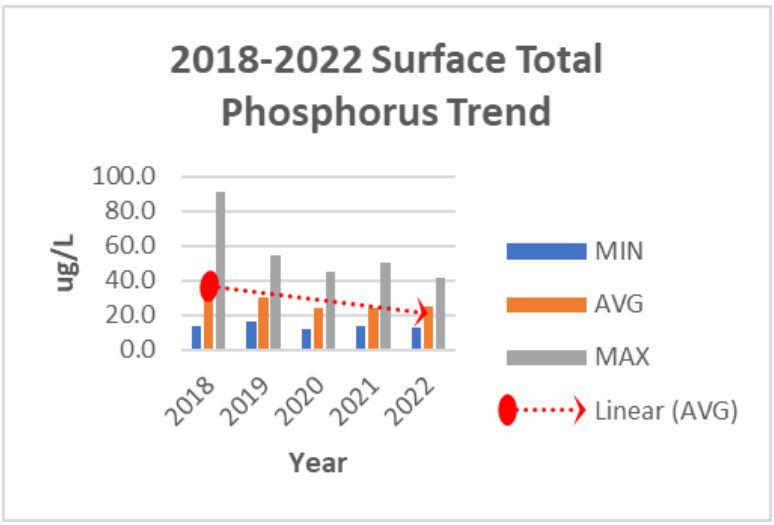
2022 Collected Lake Water Quality Data June-Sept: HLWTF collected weekly water column temperatures and dissolved oxygen profiles and water clarity data. Water samples were collected twice a month (June-September) for lab testing for phosphorus and nitrogen. HVA citizen Secchi Disk volunteer program collected near shore water clarity and temperature data.

Electronic Macrophyte Mapping Service: HLWTF provided an early July macrophyte density map for our mechanical harvesting team to help them focus on the areas of problematic macrophyte growth.

These projects result from a partnership among The Nature Conservancy, NYS DEC, Ontario County Planning Department, Ontario County SWCD, Finger Lakes Community College, Finger Lakes Institute, Cornell University, Honeoye Valley Association, the Towns of Richmond, Canadice, Bristol, South Bristol and Naples; and all lake residents and users. For more information, please contact Terry Gronwall, HLWTF Chairman at watershedtaskforce@gmail.com

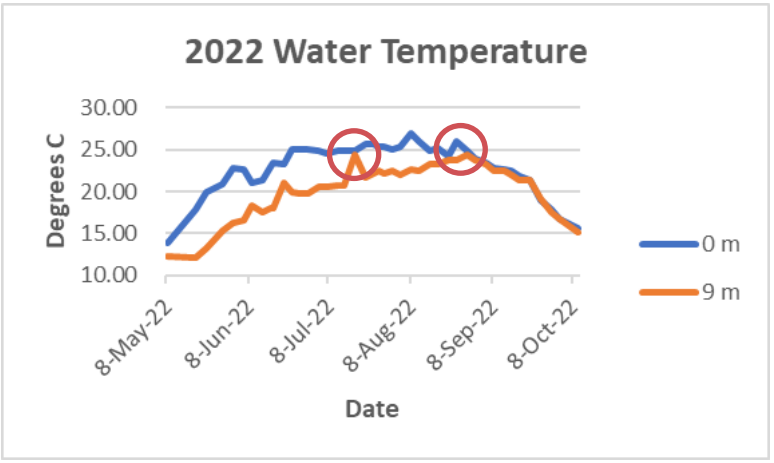
2022 State of the Lake

By Terry Gronwall, HLWTF

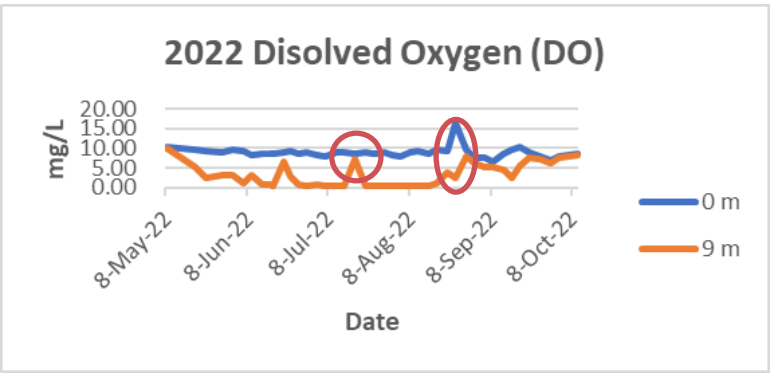


Our data shows a five-year trend of declining total surface phosphorus. 2022 was similar to 2021 from a total surface phosphorus level, but had an increase in algae and a reduction in water clarity. We anticipate a significant reduction in 2023 in surface total phosphorus, a reduction in algae, and an increase in water clarity as a result of the DEC Honeoye Lake Nutrient Inactivation (Alum Treatment) Pilot Project.

The lake had two complete mixing events during the summer of 2022. The first event occurred on July 18th and the second event occurred on August 22nd. These mixing events are shown as red circles (◯)on the water quality graphs (bottom three graphs).

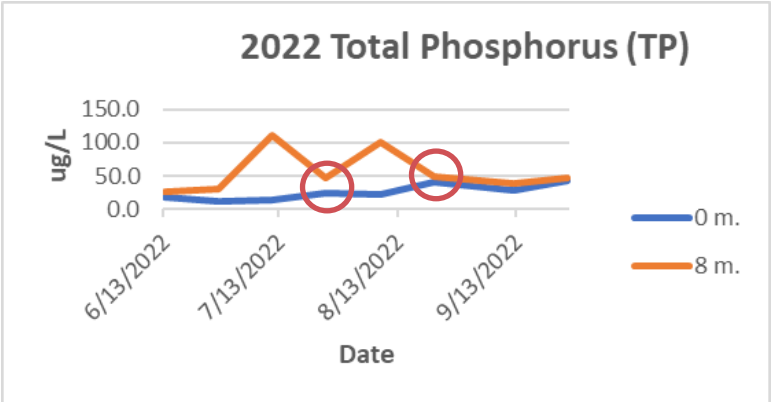


The Water Temperature and Dissolved Oxygen graphs show the effects of mixing: water temperature and dissolved oxygen became nearly uniform from the top to bottom immediately after mixing.



The Total Phosphorus graph shows that the phosphorus level near the lake bottom (orange line) peaked at ~100 ug/L before the two mixing events due to phosphorus release from the bottom sediments when the lake was stratified. The mixing event broke down the thermocline which was previously keeping this phosphorus rich water near the lake bottom. Without a thermocline, phosphorus from the bottom water was mixed throughout the water column. This resulted in a sharp drop in phosphorus levels near the bottom and an increase in phosphorus levels in the surface water (blue line).

Surface algae increased after these mixing events fueled by the cycling of phosphorus to the surface water.



Update on the Honeoye Lake Aeration Engineering Planning Project and the NYS DEC Honeoye Lake Nutrient Inactivant Pilot Study

By Terry Gronwall (HLWTF) & Betsy Landre (Ontario County Planning Department)

The first phase of the Honeoye Lake Aeration Engineering Project has been completed. A Public Information Webex meeting was held on April 26th, 2022. The final Princeton Hydro Aeration Engineering Planning Report was released in June 2022. The Final Report, Webex presentation, and Webex recording are available at: www.honeoyelakewatershed.org/aeration

In September 2022, NYS Department of Environmental Conservation (DEC) announced plans for a Nutrient Inactivant (Alum Treatment) Pilot Study in Honeoye Lake. In recent years, DEC conducted alum treatments on two small lakes in the Lower Hudson Valley to assess impacts of alum treatments on phosphorus levels and lake ecosystems. The Honeoye Lake Alum Treatment was introduced as DEC's first large lake pilot study. The DEC has been conducting these pilot studies as it evaluates a potential permitting process for the use of Alum Treatments since they are not currently allowed in New York State. The DEC's Alum Treatment was completed on November 18, 2022. It will be interesting to see how much phosphorus reduction, algae reduction, and water clarity increase occur next summer. DEC's Alum Treatment Project information is available at: Honeoye Lake Nutrient Inactivant Pilot Study.

The DEC 's Nutrient Inactivant (Alum Treatment) Study and the Aeration Planning Project engineering design are intended to address the same source of legacy phosphorus in Honeoye Lake. Legacy phosphorus is released from the deep-water lake bottom sediments during periods of lake stratification, when oxygen becomes depleted in the lake's bottom layer. The DEC intends to monitor the effectiveness of the Alum Treatment over the course of 3-5 years.

The HLWTF will also evaluate the DEC's Alum Treatment effectiveness and lifespan in conjunction with its annual lake monitoring program. Data collection will help determine if the best long-term strategy for managing legacy phosphorus in Honeoye Lake is 1) a combination of Alum Treatment followed by Aeration or 2) doing additional Alum Treatments in the future provided the DEC establishes a permitting process for such treatments in New York State based on their pilot studies.

While the Alum Treatment is evaluated, the Aeration project committee will review the effectiveness and reliability of existing aeration systems in use in North America. First-hand knowledge from mangers of existing aeration systems can assist the local Honeoye Lake community's decision-making process. Funding options will also be explored, as well as the best entity to own, manage and maintain an aeration system, if aeration is recommended to be part of the overall Honeoye Lake water quality strategy.

Terry Gronwall (HLWTF and Town of Canadice) and Betsy Landre (Ontario County Planning Dept.) extend thanks to local project committee members who provided data, reviewed draft documents, and raised important questions throughout the Aeration Planning Project: David Baker, Town of Richmond; Nelson Hairston, Professor Emeritus, Cornell University; Bruce Gilman, Professor Emeritus, Finger Lakes Community College; and Linda Vanderbeck, Honeoye Valley Association

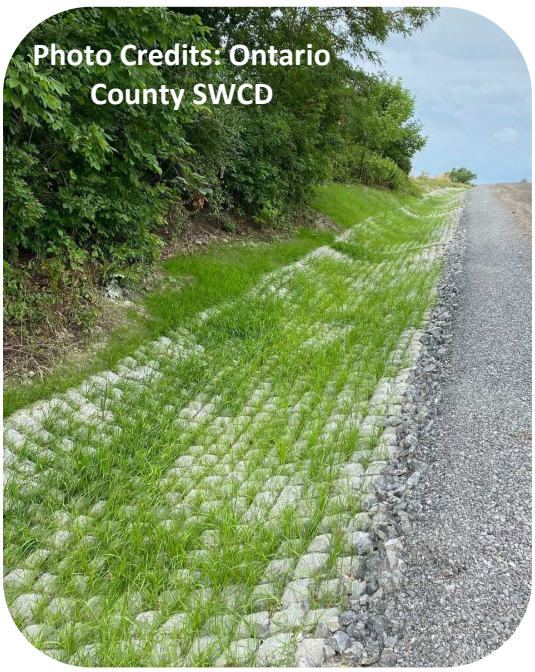
Staff from DEC Region 8 in Avon and Albany are appreciated for their guidance. The aeration design and planning project is funded by a Planning Grant from the NYS DEC Water Quality Improvement Program.

Photo Credit: Terry Gronwall

Flexamat Installed on Cratsley Hill Road

By Ontario County Soil & Water Conservation District (SWCD)

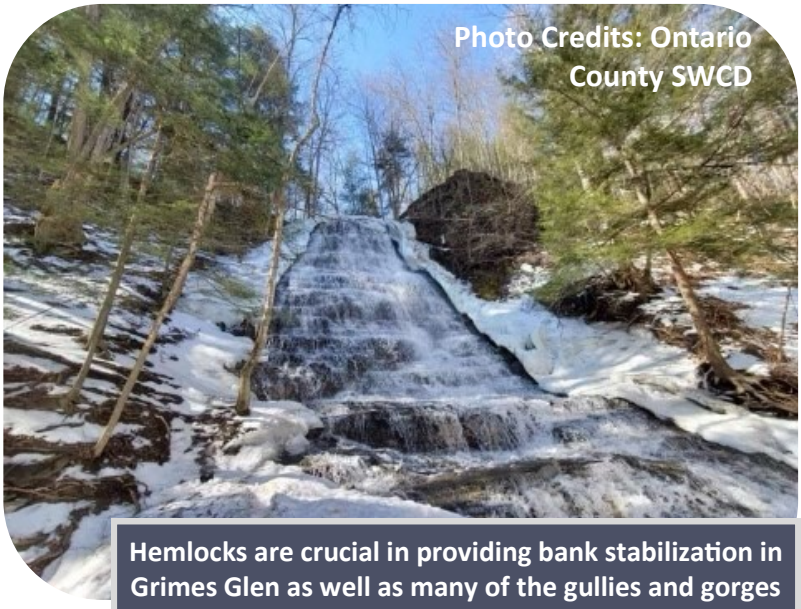
The Ontario County SWCD partnered with the Town of Canadice Highway Department to stabilize a ditch experiencing severe erosion along Cratsley Hill Road. Erosion from steep roadside ditches, such as this, has a direct effect on the water quality in downslope Honeoye Lake. Nutrients are bound to sediments and when erosion occurs and washes these sediments downslope they accumulate in our waterbodies and can help fuel the occurrence of Harmful Algal Blooms (HABs). This particular site was stabilized using a material called Flexamat. Flexamat is a permeable mat made of woven material overlaid with concrete blocks in a grid pattern. This provides the stabilization needed to withstand flows from stormwater during major rain events while also leaving space between the blocks for vegetation to establish. This vegetation helps to further stabilize the road ditch while also filtering and slowing water. Funding for this project was made possible through the NYS DEC Water Quality Improvement Project with match funding coming from the Town of Canadice in the form of labor and equipment. This project is part of a larger, ongoing effort in the Honeoye Lake Watershed to reduce sediment and nutrient loss from roadside ditches. Future projects include the installation of Flexamat material along portions of Jersey Hill Road and Canadice Hill Road and are scheduled to be completed in 2023. The District would like to thank the Town of Canadice Highway Department for their expertise in installing this project!



Hemlock Woolly Adelgid Treatment & Outreach

By Ontario County Soil & Water Conservation District

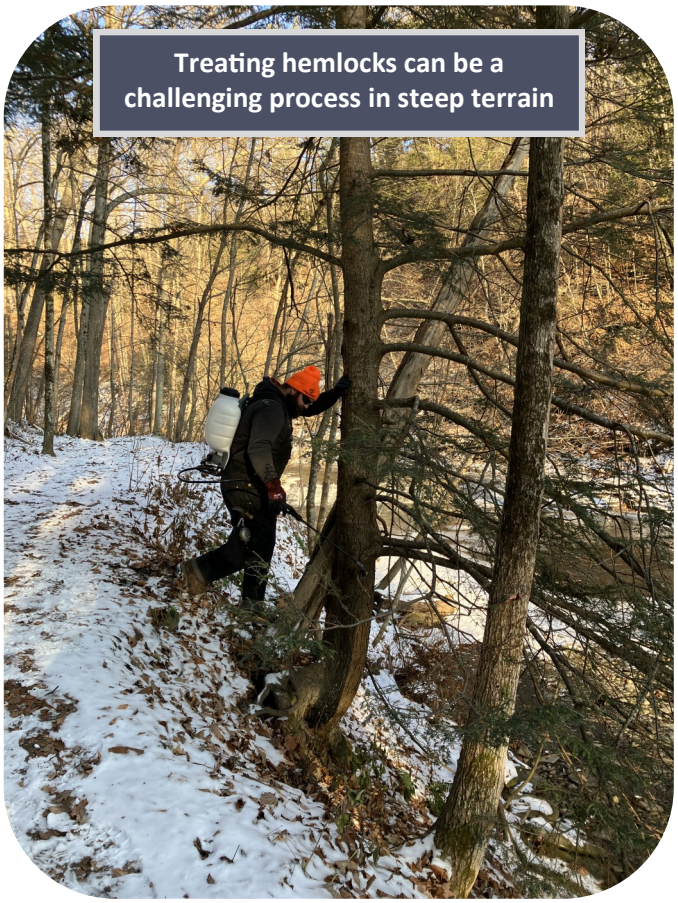
In 2022, we kicked off a program to control Hemlock Woolly Adelgid (HWA), an invasive species that threatens our hemlock trees. In February 2022, the Ontario County Soil & Water Conservation District (SWCD) partnered with the Canandaigua Lake Watershed Association, Finger Lakes Partnership for Regional Invasive Species Management (PRISM) and the Finger Lakes Land Trust to hold an event at the Cumming Nature Center training volunteers in identification and reporting of HWA as well as treatment options. Having current knowledge of infestations helps prioritize chemical treatment and supports bio-control, both necessary tools in the long -term management of HWA.



Hemlocks are crucial in providing bank stabilization in Grimes Glen as well as many of the gullies and gorges around the Finger Lakes

For a start, 68 hemlock trees were treated at Grimes Glen this autumn. Several funding sources, including a recently awarded Environmental Benefits Project from the New York State Department of Environmental Conservation as well as a grant obtained from the US Forest Service will be used in 2023 to treat hemlocks at Grimes Glen, Briggs Gully and Harriet Hollister State Recreation Area. Briggs Gully and Harriett Hollister are both located in the Honeoye Lake Watershed.

Protecting our critical riparian corridors helps stabilize streambanks and protects water quality. The District looks forward to continued work with a variety of partners and local landowners to identify and monitor the HWA threat and target efforts of chemical control and bio-control releases for long term management. Keep an eye out for upcoming trainings to learn how you can get involved.



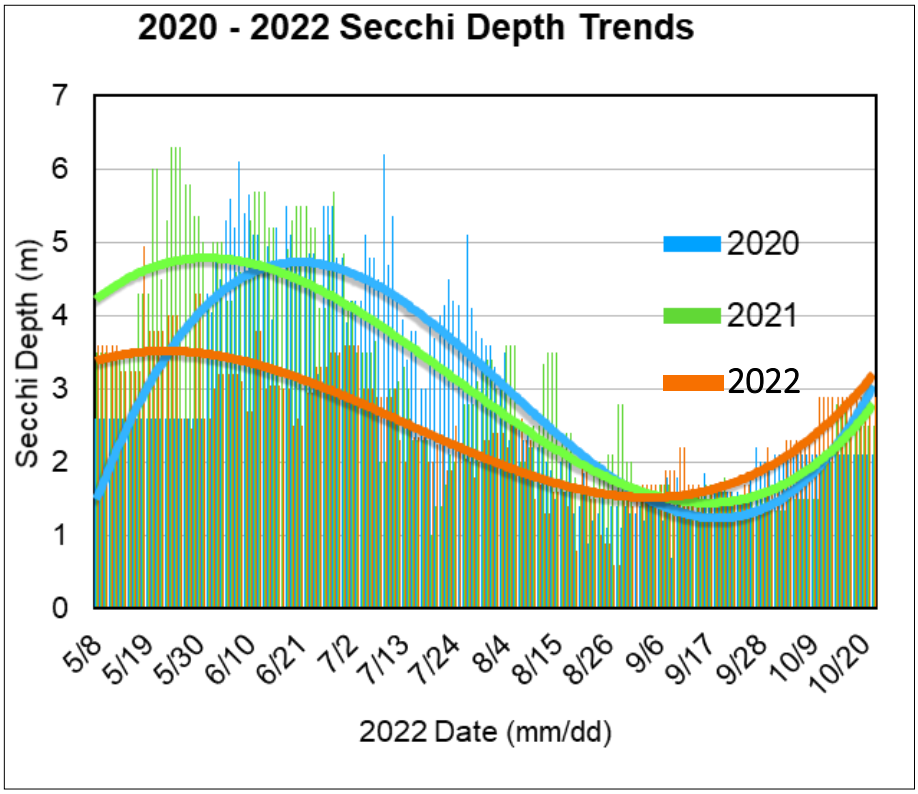
Treating hemlocks can be a challenging process in steep terrain

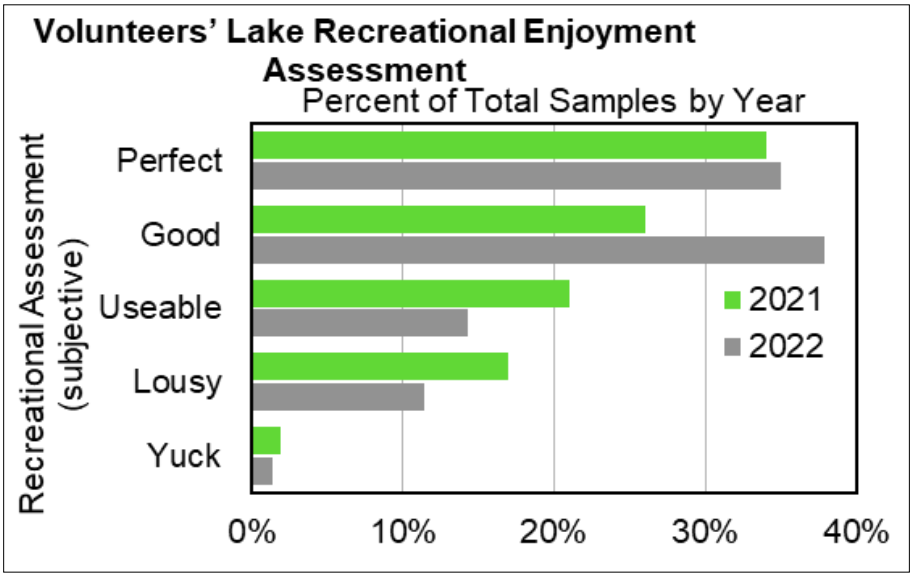
Infected tree: look for these white, fuzzy specks on the underside of the hemlock branches

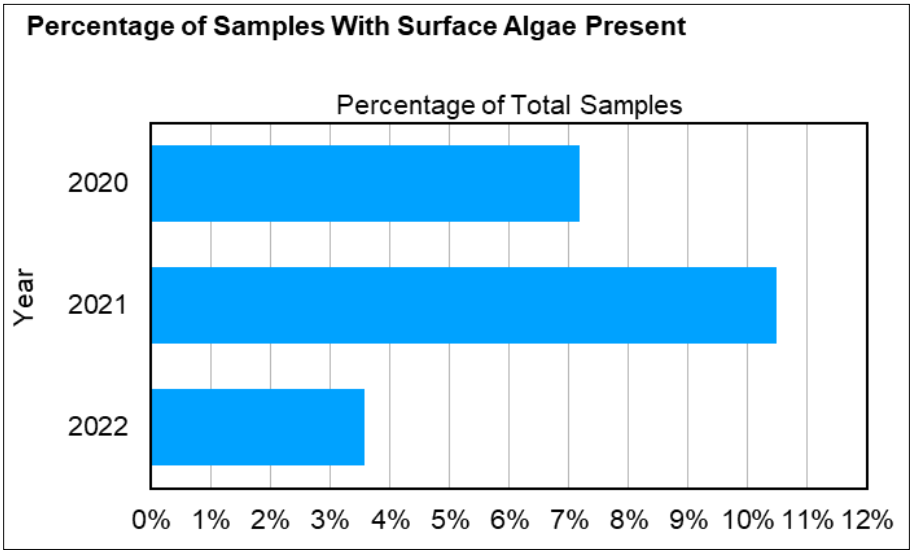
2022 Honeoye Lake Secchi Disc Program

By Linda Vanderbeck, Honeoye Valley Association

The 2022 Honeoye Lake Secchi Disc Program took place from May 8 through October 10, 2022. 140 measurements were taken by 7 volunteers at 8 separate lake locations - the 30' deep spot, California Point, 3 in the north basin and 2 in the south basin. Water clarity followed the typical pattern of clearest water during the spring when water temperatures are cool, gradually becoming more turbid as water temperatures rise. Like previous years, lowest clarity occurred during mid to late August and September at the same time that water temperature reached its peak.







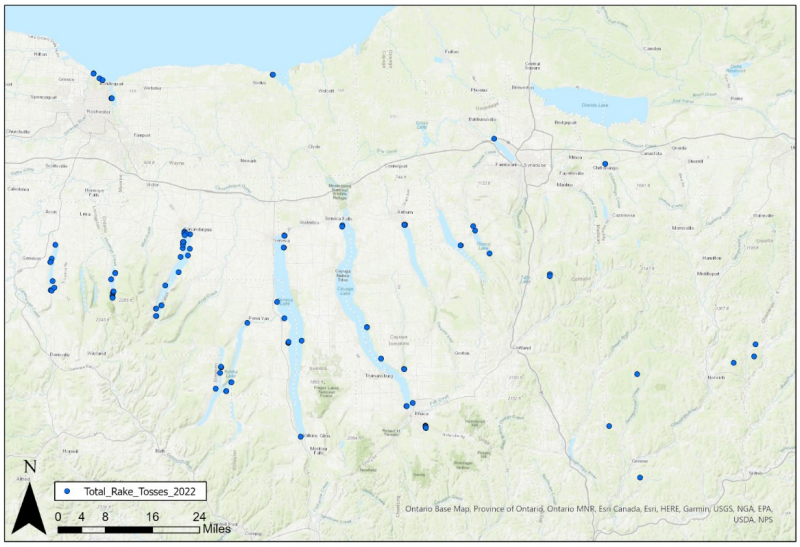
In 2022 the water was not as clear in spring as previous years, however by late summer converged with previous year's clarity. This variation is primarily due to weather. Volunteers' assessment of the amount of algae in the water column was very similar to previous years, but showed a marked reduction in surface algae or "scum". In 2020 and 2021 volunteers reported surface algae in 7.2% and 10.5% of their samples, respectively vs only 3.6% in 2022. This led to much more favorable perceived recreation enjoyment with 2021 having 60% reporting "perfect" or "good" vs 73% in 2022, suggesting that surface algae impacts lake aesthetics much more than algae in the water column.

Secchi data from 2022 and previous years provides a strong baseline for evaluating the effects of DEC Honeoye Lake Nutrient Inactivation Pilot Project (alum treatment) where we expect to see significant improvement in water clarity during the late summer and fall of 2023.

Finger Lakes Macrophyte Survey Program

By Linda Vanderbeck, Honeoye Valley Association

One of the many conservation activities that take place on Honeoye Lake is the Finger Lakes Macrophyte (aquatic plants) Survey Program (MSP) directed by the Finger Lakes Institute (FLI). The FLI is a department of Hobart and William Smith Colleges whose mission is to advance, coordinate, and disseminate scientific understanding about the Finger Lakes environment. The main objective of the MSP is to monitor, identify and thwart invasive aquatic plants that threaten lakes and other waterways in the Finger Lakes region. In 2018, I joined the program as a community volunteer because I enjoy outdoor activities and wanted to contribute something positive to the natural world. During these past 5 years, I've been pleasantly surprised to find I also developed a stronger connection to our lake community, made some friends, and gained a better understanding of our lake's ecosystem.



*Macrophyte Survey Program Map and other MSP data provided by FLI/FL-PRISM

FLI provided me and the other volunteers with the information and supplies we need to sample for key invasive aquatic plant species in waterbodies near us. It has been convenient to attend either online or in person training sessions where we learn sampling techniques, how to identify aquatic plants, and how to report findings. The program coordinator keeps in touch, provides information that improves our skills, and answers questions we might have. FLI provides identification guides for native and invasive plants, with a focus on three highly destructive invasive species - Water Chestnut, Hydrilla, and Starry Stonewort. So far, MSP volunteers have not found any of these species in Honeoye Lake.

During the 2022 season, I was one of 38 volunteers and 8 watercraft stewards who participated in the MSP. We collected 336 total samples from 23 waterbodies throughout the Finger Lakes region. Together we reported a total of 7 unique invasive species and 14 unique native species. The attached map shows all of our sampling locations for 2022.

The MSP runs annually from June to October. FLI asks us to take samples once every two weeks or whenever possible. Sampling and reporting takes no more skill or knowledge than what is required in a high school science class, and is fun and informative. I find it satisfying knowing that I am contributing to lake conservation that benefits our lake community, and that my kids and grandkids (and their kids and grandkids) might enjoy the same beautiful Honeoye Lake that I do. If you are interested in being a volunteer in the 2023 season or want additional information you can contact Finger Lakes PRISM Coordinator Sam Beck-Andersen at beck-andersen@hws.edu.To find out more about the FLI Macrophyte Survey Program and other programs at the Finger Lakes Institute, please visit their website below and click the "Take Action" tab: *fingerlakesinvasives.org*


Photo Credit: Terry Gronwall

Finger Lakes Institute Watercraft Stewards on Honeoye Lake, 2022

By Sam Beck-Andersen, Finger Lakes PRISM Coordinator

Preventative measures like watercraft inspections help fight the harm and negative impact of aquatic invasive species (AIS) spread through boating and recreation. At Honeoye Lake State Marine Park (HLSMP), watercraft stewards inspected boats coming into and leaving the water from May 26th through August 26th. Steward programs from both Finger Lakes Institute (FLI) and SUNY ESF/NY Office of Parks Recreation and Historic Preservation (OPRHP) operated at this boat launch in 2022. Efforts were coordinated between management of both programs to ensure comprehensive steward coverage throughout the season. While the number of days covered by stewards increased in 2022, all measures of traffic decreased from the previous year to below pre-COVID rates of traffic and total watercraft inspected (**Table 1**.)

Table 1. Results of FLI and OPRHP watercraft steward coverage at Honeoye Lake State Marine Park from 2019 to 2022, and percentage change from previous year. Total watercraft inspected excludes watercraft that did not agree to inspection.

	2019	2020		2021		2022	
Days Covered	79	66	-16%	64	-3%	80	25%
Total Watercraft Inspected	3002	3797	26%	3157	-17%	2601	-18%
Average Inspections/Day	38	58	53%	49	-16%	33	-34%
Total people reached	6438	9063	41%	6770	-25%	5477	-19%

Of the total watercraft inspected by stewards in 2022, 25% (n=650) had organisms attached. Of those 650 watercraft, stewards found 326 AIS during inspections. Both native and invasive species are often found on the same watercraft. The most common AIS found during inspections are one of three species: Eurasian watermilfoil, curly-leaf pondweed, or zebra mussel (**Table 2**). Many other Finger Lakes share the same most common AIS found during inspections. Each year watercraft stewards interact with thousands of boaters and intercept hundreds of AIS entering and leaving Honeoye Lake. Between the active interceptions of AIS and the information spread to boaters every day, stewards are actively preventing the spread of AIS to Honeoye Lake and throughout the Finger Lakes. The Finger Lakes Institute looks forward to continuing the valuable partnership with OPRHP and Honeoye Valley Association to provide watercraft stewards on Honeoye Lake.

Table 2. Most common invasive species found on launching (entering Honeoye Lake) and retrieving (exiting Honeoye Lake) watercraft for 2019-2022.

Species	2019	2020	2021	2022
Eurasian watermilfoil	Launching-24	Launching-98	Launching-37	Launching-18
	Retrieving-377	Retrieving-801	Retrieving-431	Retrieving-84
Curly-leaf pondweed	Launching-37	Launching-43	Launching- 21	Launching-9
	Retrieving-693	Retrieving-492	Retrieving- 438	Retrieving- 149
Zebra mussel	Launching-5	Launching-27	Launching-6	Launching-2
	Retrieving-505	Retrieving-154	Retrieving- 177	Retrieving- 50

Harriett Hollister Park Winter Activities

Looking for some winter activities? Harriet Hollister Spencer State Recreation Area (HHSSRA) is located in the Honeoye Lake Watershed and is an excellent spot to visit. Here is some information on the park:


Photo Credit: Ed Jackson

- Located just south of Honeoye Lake in Canadice, NY
- Address: 6775 Canadice Hill Rd Springwater, NY 14560
- 2,000' elevation
- 1,550-acre recreation area
- 679 acres were donated by Harriet Hollister Spencer's family at her request and was later expanded by New York State
- 22.83 miles of multi-use trails for hiking, cross-country skiing, snowshoeing, and a snowmobile route
- NYS Parks website with information on the park: *parks.ny.gov/parks/164/details.aspx*
- Go Finger Lakes: *gofingerlakes.org/locations/harriet-hollister-spencery-state-recreation-area/*
- The Rochester XC Ski Foundation grooms the cross-country trails and with the park open daily from sunrise to sunset: *rxcsf.org/ski-areas/harriet-hollister/*
- You can find a winter trail map at the link here: *parks.ny.gov/documents/parks/HarrietHollisterTrailMapWinter.pdf*
- Who was Harriet Hollister Spencer? You can find out here: *rbscp.lib.rochester.edu/finding-aids/AS75*


Photo Credit: Ed Jackson


Photo Credit: Ed Jackson

Muller Field Station

By Alli Esposito, Assistant Director at Muller Field Station, Finger Lakes Community College


All Photo Credits in Article: Alli Esposito

Finger Lakes Community College's Muller Field Station (MFS) is located on a 48-acre property in Honeoye, NY, at the south end of Honeoye Lake. It sits upon and is surrounded by the traditional lands and waters of the Seneca Nation, *Onödowá'ga:*, "Great Hill People"; the original stewards of this valley. The field station is adjacent to the Department of Environmental Conservation's Honeoye Lake Wildlife Management Area as well as lands that are managed and protected by organizations such as the Finger Lakes Land Trust and The Nature Conservancy.

The Mullers: Emil and Florence Muller purchased what is now known as the Muller Field Station in 1967 and ultimately owned a total of 2,500 acres in the area including more than two miles of the Honeoye Inlet. The Muller's envisioned preserving this unique natural habitat, rich in biodiversity, for generations to come. After Emil's death, Florence continued to work to leverage this land as an asset for education and community enrichment. In 1999 she donated 48 acres along with the Swiss-style chalet which is now the Muller Field Station. Florence passed away in 2016; however, both The Emil Muller Foundation and Florence Muller Foundation continue to provide grant funding to support ongoing projects, programming, and upgrades.

Education & Outreach: Muller Field Station serves as a place that offers engaging and inspiring outdoor learning experiences for K-12 schools (including homeschool groups, clubs, and other organizations), FLCC conservation college students, and community members. At MFS people are encouraged to explore and observe their surroundings, experience wildlife and environmental processes in context, engage in critical thinking, and leave with a deeper appreciation and connection to the land and water.

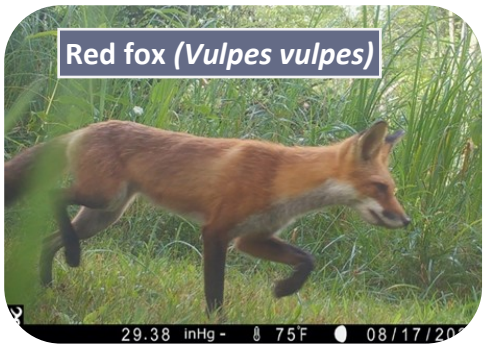
MFS offers a wide variety of community programs year-round. One of the field station's most popular offerings are the community channel paddles that run throughout the spring, summer, and fall months. Participants are welcome to use MFS canoes, kayaks, and life jackets at no charge, or are welcome to bring their own. Paddles through the swamp are both educational and peaceful and are led by passionate and knowledgeable MFS conservation educators. These paddles are a great way to learn about the flora and fauna of the swamp. Another popular year-round offering is the monthly speaker series, "A Talk on the Wild Side". This is an educational series that seeks to connect the local community to diverse and exciting aspects of nature and culture. Topics include invasive species management, ornithology, indigenous culture, stewardship and conservation, herpetology, and wildlife management, just to name a few.


"A Talk on the Wild Side" October 2022

Muller Field Station Continued…

Great blue heron *(Ardea herodias)* eating a largemouth bass *(Micropterus salmoides)*

Camera Traps at Muller Field Station: Camera traps, also known as trail cameras, are a major part of the K-12 program and FLCC student research that takes place at the field station. Camera traps are an excellent, passive, and exciting way to monitor the wildlife that is living in and around the silver maple-ash swamp. There are approximately 12 long term cameras set out across the property in varying habitats and over the years there have been some incredible captures. These cameras take wonderful photos and videos of the animals traversing the grounds and offer a glimpse into their daily routines and behaviors.



Student Internship Program: S.W.A.M.P.: The FLCC Muller Field Station Field Studies Internship program, newly coined as S.W.A.M.P. (Science With A Mindful Purpose), encourages students to be the 'eyes and ears' of the surrounding landscape– and document it! S.W.A.M.P. is fully funded by the Florence M. Muller Foundation, and provides selected students an opportunity to gain tangible, hands-on experience through field sampling techniques, observation, data collection, and more. Internships this semester include biomonitoring and native seed collection, permaculture, invasive species monitoring at the Honeoye Lake Inlet, Taylor Marsh vegetation mapping, forestry, K-12 conservation education, long-term trail camera studies, and animal enrichment at Finger Lakes Wildlife Center. So far, 230 service hours have been completed to date!

Visit us at Muller: Haven't been to the field station? Check out the grounds, facilities, and engage in fun outdoor activities during the MFS Annual Open House event! This is a family friendly event that will take place in May. A date is yet to be determined.

To stay informed about the various offerings at Muller Field Station, it is encouraged that you like their Facebook page "FLCC Muller Field Station" as well as subscribe to their monthly newsletter. To subscribe, please email alexandria.esposito@flcc.edu. You can also find entertaining and educational videos on Muller Field Station's YouTube channel.

Update on Biodiversity in Ontario County

By Bruce Gilman, Professor Emeritus & Curator of Finger Lakes Herbarium, Finger Lakes Community College

In 1999, Florence Muller generously donated her home and adjacent lands to the Finger Lakes Community College Foundation with the wish that they be used for conservation education. Thus began the establishment and activities of the Muller Field Station, located in the biologically rich southern Honeoye Valley. *But what was the actual biodiversity of organisms in this local landscape?* I led an effort, supported by my department faculty colleagues to document how many species inhabited the lands and waters around the field station. Student teams were assembled to assist faculty in this project. *What were the findings of this initial biodiversity inventory?* Sixty-four mushrooms and 75 non-flowering plants, including lichens, mosses, horsetails, clubmosses and ferns, were cataloged. Eleven conifers were noted. By far the largest group of organisms identified were the flowering plants with a total of 557 different species. With time, the number of insects will surpass the flowering plant total but at the time the insect biodiversity was about 200 species. There were 20 species of amphibians noted and 15 species of reptiles including three species that are regionally significant, the spiny soft-shell turtle, the timber rattlesnake (historic record) and the coal skink. Twenty-seven different types of fish were described from Honeoye Lake and its tributary streams. Most of the larger mammals were inventoried, but the number of smaller species was thought to be incomplete. So far, 33 species of mammals were known to inhabit the region. Birds that migrate through or nest within the southern Honeoye Valley total 159 species including the notable occurrence of sand hill cranes! All these organisms make their home in 32 natural and cultural plant community cover types.

Though now retired as field station director, I remain intellectually focused on better understanding the biodiversity of our broader region. This scientific curiosity, kindled over the years, has led me to my current project: updating the Ontario County Flora. I have been a collector of plants for five decades, pressing representative specimens and placing them in an herbarium. *What is an herbarium?* A biological research collection of plants used to document the botanical biodiversity of a region. Essentially, it is a library of plants! As a natural history library collection, I sought ways to make the plants found in the college's Finger Lakes Herbarium (FLH) more accessible to our students, outside researchers, and the general public. In 2021, I began the arduous task of creating a database for the FLH. After consulting with other herbaria curators and field botanists, I took the appropriate first step of creating an Excel© spreadsheet with entry fields for label data and additional information about each specimen. The database currently has about 2,500 entries out of an estimated 20,000 specimens. Clearly, much work remains. And exploration of local natural areas with the collection of new voucher specimens continues. Recent notable plant discoveries include Turk's cap lily, swamp lousewort and knight's plume moss. The lily was previously unknown in Ontario County, but I discovered a winter "skeleton" of it while walking a trail in the Honeoye Inlet Wildlife Management Area (WMA). Standing about five feet tall when fully grown, it supports a cluster of large, nodding, orange spotted flowers with recurved petals. It is an early summer beauty of damp meadows. The lousewort, what an unfortunate name, was previously known from one location in the northern portion of Ontario County. Now I have documented it from four additional sites. It's a small snapdragon-like plant with pale yellow flowers. Standing one to two foot in height with lobed fern-like leaves, it is a fall flower of low stream terraces and swamps. The knight's plume moss was discovered growing on rich organic soil in an ancient glacial meltwater channel in southern Ontario County. It is also known to grow on damp, rotting logs. I was first introduced to this moss in the Adirondacks where it is called the "prettiest moss in mossdom", a name I still prefer to use. It forms distinctive colonies of upright, two to three inch tall, diamond-shaped pinnate plumes of shiny green and gold fronds. Once seen it will never be forgotten.

Locally rare Turk's cap lily, *Lilium superbum,* in the Honeoye Inlet WMA; Photo Credit: Alli Esposito

The Honeoye Lake Watershed Task Force was formed in 1998 by:

Town of Richmond

Town of Canadice

Town of Bristol

Town of Naples

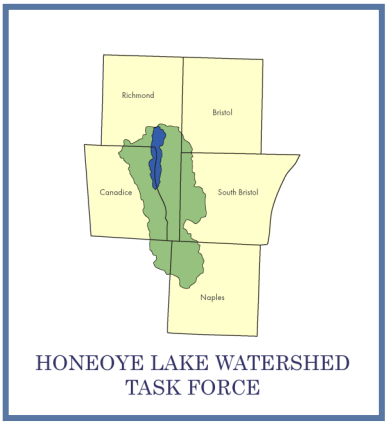
Town of South Bristol

Honeoye Valley Association

To Protect and Improve the Water Quality of Honeoye Lake.

Voting Members Include:

Terry Gronwall, Councilmember, Town of Canadice (Chairman)
Dave Baker, Councilmember, Town of Richmond
Lauren Bolonda, Councilmember, Town of Bristol
Ann Jacobs, Representative, Town of South Bristol
Mark Adams, Representative, Town of Naples
Linda Vanderbeck, Representative, Honeoye Valley Association



Permanent Professional Support is Provided by:

Megan Webster, Katie Lafler, Alaina Robarge, and Diana Thorn Ontario County Soil & Water Conservation District
Dr. Bruce Gilman, Professor Emeritus, Finger Lakes Community College
Tom Harvey, Betsy Landre, Ontario County Planning Department

Project Specific Professional Support is Provided by:

NYS Department of Environmental Conservation
Finger Lakes Community College
The Nature Conservancy
Finger Lakes Institute
Cornell University
Cornell Cooperative Extension of Ontario County
Ontario County Water Resources Council
Princeton Hydro Consulting Services

Further Information may be obtained by contacting:

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Photo Credit: Dawn Steiger; Winter in Harriett Hollister Park